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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/657,343 | 09/08/2003 | John Chen | P/144-321 | 1656 |

7590 11/14/2006

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EXAMINER

FIGUEROA, FELIX O

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2833

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/657,343 | Applicant(s) CHEN ET AL. | |
| | Examiner Felix O. Figueroa | Art Unit 2833 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-9, 12-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-9 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 and 8/3-8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 6,132,260) in view of the prior art Figures 1-3 of Yamamoto et al. (US 5,865,934) and Kunz (US 6,171,152).

Wu discloses a multi-port connector comprising: a housing (2) having at least two aligned compartments (210,212) to receive respective plugs; a printed wiring board (7) separating the two compartments and having circuit patterns (70) on opposite sides; a first plurality of conductive contact fingers (4 top) in one of the compartments and having first and second portions (41,42); a second plurality of conductive contact finger (4 bottom) in another of the compartments and having first and second portions. Wu discloses an assembly housing (5) in one of the compartments. Please note that the recitation of the intended use (i.e. for housing two sets of toroids) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Wu discloses substantially the claimed invention except for the multiple layers on the printer wiring board. Yamamoto (in prior art Figs. 1-3) teaches a multiplayer printed wiring board having circuit patterns (23) on opposite sides of opposed non-conductive layers (22) and a metal shielding layer intermediate the non-conductive layers to provide structural strength and heat dissipation (col. 9, lines 59-61). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the printed wiring board of Wu as a multiplayer printed wiring board having circuit patterns on opposite sides of opposed non-conductive layers and a metal shielding layer intermediate the non-conductive layers, as taught by the prior art of Yamamoto, to provide structural strength and heat dissipation.

Wu, as modified, discloses substantially the claimed invention except for the metal separator. Kunz teaches the use of a metal separator (74) for separating sets of toroids in order to reduce electromagnetic interference caused by one set to the other. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a metal separator, as taught by Kunz, to reduce electromagnetic interference.

Regarding claim 4, Wu, as modified, discloses the toroid base assembly has a first set of contacts for connecting the two sets of toroids to the circuit patterns on the printed wiring board and a second set of contacts for connecting the two sets of toroids to an external circuit.

Regarding claim 5, Wu discloses the first portions of the contact fingers having spacing equal to the spacing between the contacts in the corresponding plug.

Regarding claim 6, Wu discloses the second portions spaced apart by a distances greater than the spacing of the first portions (Fig.3).

Regarding claims 8/3-8/6, Wu discloses the compartments being upper and lower vertically aligned compartments.

Claims 7 and 8/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Laity (US 6,183,308).

Wu, as modified by Yamamoto, discloses substantially the claimed invention except for resilient spring action of the contact finger. Laity teaches a connector having contact fingers (354) with resilient second portions (358) being connected to traces on a circuit board by spring action to provide a resilient and secure connection (thus efficient and easier to complete). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having contact fingers with resilient second portions being connected to traces on a circuit board by spring action, as taught by Laity, to provide a resilient and secure connection.

Claims 9/8/3-9/8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Goodall et al. (US 5,531,612).

Wu, as modified, discloses substantially the claimed invention except for the metallic shields. Goodall teaches the use of front and rear metallic shields to protect the connector from external electromagnetic interference. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having front and rear metallic shields, as taught by Goodall, to protect the connector from external electromagnetic interference.

Claims 9/8/7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto, Kunz and Laity, and further in view of Goodall et al.

See previous discussion on claims 9/8/3-9/8/6.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Goodall et al.

Wu, as modified (see discussion on claim 3), discloses substantially the claimed invention except for the plurality of sets of upper and lower vertically aligned compartments. Goodall teaches a plurality of sets of upper and lower vertically aligned compartments to maximize space. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to duplicate the connector of Wu to have a plurality of sets of upper and lower vertically aligned compartments, as taught by Goodall, to maximize space.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto, Kunz and Goodall, and further in view of Laity.

See previous discussion on claim 7.

Response to Arguments

Applicant's arguments filed 09/11/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamamoto (in prior art Figs. 1-3) teaches a multiplayer printed wiring board having circuit patterns (23) on opposite sides of opposed non-conductive layers (22) and a metal shielding layer intermediate the non-conductive layers to provide structural strength and heat dissipation (col. 9, lines 59-61). Please note that the fact that applicant has recognized another advantage (i.e. providing shielding) which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to Applicant's argument that the "separator is actually the middle part of a three-piece Faraday shield", please note that this does not deny the fact that it is a metal separator. Please note that the metal separator of Kunz separates the toroids in the front from the toroids in the back.

In response to applicant's argument (regarding claim 7 and 8/7) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case,

Laity teaches a connector having contact fingers (354) with resilient second portions (358) being connected to traces on a circuit board by spring action to provide a resilient and secure connection, thus efficient and easier (than soldering) to complete.

In response to applicant's argument that "there is not suggestion as to how that might be effected in connection to Wu", please note that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to Applicant's argument (regarding claim 9/8/6) that the spacing between the contacts and the terminals are identical, please note while Applicant is comparing 42 and 61, claim 6 refers to 41 and 42, which show the required spacing difference.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Felix O. Figueroa
Art Unit 2833